

ABSTRACT OF THE DISCLOSURE

An optical fiber, a mixture solution of the photosetting resins polymerizing in two different polymerization types, and a transparent container are prepared. The photosetting 5 resins are not copolymerized, and have different activation wavelengths of the photopolymerization initiators for hardening. Employing a combination in which the activation wavelength of a photopolymerization initiator for a photosetting resin with higher refractive index after 10 hardening is longer than the activation wavelength of a photopolymerization initiator for a photosetting resin with lower refractive index after hardening, a core portion can be only formed by hardening the photosetting resin with higher refractive index due to a difference between two wavelengths. 15 Thereafter, a clad portion can be formed by hardening two kinds of photosetting resins, whereby an optical transmission device can be manufactured.